

Appl. No.: 10/573,950
Arndt. dated 08/11/2008
Reply to Office action of 04/11/2008

Amendments to the Claims:

1. (Currently Amended) A stent configured to reduce traumatization of a vessel wall, the stent comprising:

with a tubular support frame (2) that can be expanded from an initial state (A) to a support state (S), in which the tubular support frame (2) comprises at least two annular segments (3-6) that are formed by struts (7, 8, 9,10) that are interconnected in a corrugated manner via transitional sections (11, 12) and in which adjacent annular segments (3-6) are coupled by connectors (13), wherein one of the annular segments (3-6) corresponds to a proximal end of the tubular support frame (2) and one of the annular segments corresponds to a distal end of the tubular support frame, wherein every other transitional section (12) at the proximal and distal ends of the tubular support frame (2) has a widened head end (18) that axially projects proximally at the proximal end and distally at the distal end and has a convexly rounded front section (19), and concavely rounded throat sections (20, 21) between the head end (18) and the struts (9,10) connected to the head end (18), and convexly rounded edge sections extending between the convexly rounded front section and the concavely rounded throat sections; and wherein the concavely rounded throat sections (20, 21) are configured to intermesh with adjacent transitional sections (11) in the initial state (A).
2. (Canceled)
3. (Canceled)
4. (Previously Presented) The stent according to Claim 1, further comprising a plurality of deflection elements (24,25) for a thread looping around the outside of the support frame (2) that are arranged on the annular segments (3, 6) at the proximal and distal ends of the support frame.
5. (Previously Presented) The stent according to Claim 1, wherein each connector (13,13') has a longitudinal section (14,14') running substantially parallel to the a longitudinal axis L of the stent and comprises a compensation section (15,15') aligned transversally to the latter and configured in a U or V shape.

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6. (Previously Presented) The stent according to Claim 5, wherein the U-shaped or V-shaped compensation sections (15,15') of the connectors (13,13') are arranged in an area (16) between two axially adjacent, spaced annular segments (3,4,5,6).

7. (Previously Presented) The stent according to Claim 1, further comprising an annular segment (4,5) interconnected to an adjacent annular segment (3,6) at the proximal or distal ends of the tubular support frame (2), wherein the connectors (13,13') extend out from a ridge area (17) of two struts (7,8) of the annular segment (4,5) to the transitional section (11) of the adjacent annular segment (3,6) at the proximal or distal ends of the tubular support frame (2).

8. (Previously Presented) The stent according to Claim 1, wherein the connectors (13,13') are aligned in axial succession.

9. (Previously Presented) The stent according to Claim 4, wherein each strut comprises first and second ends, and wherein each widened head portion is located at the first ends of the annular segments at the proximal and distal ends of the support frame and each deflection element is located at the second ends of the struts.

10. (Previously Presented) The stent according to Claim 4, wherein at least a portion of each deflection element is configured to be positioned adjacent to at least a portion of an adjacent connector in the initial state.

11. (Previously Presented) The stent according to Claim 1, wherein each strut comprises first and second ends, and wherein each head end is spaced outwardly from the first ends of adjacent struts by a distance corresponding to the concavely rounded throat sections.

12. (Previously Presented) The stent according to Claim 1, wherein each widened head end axially projects further proximally at the proximal end of the tubular support frame and further distally at the distal end of the tubular support frame than an adjacent transitional section.

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13. (Previously Presented) The stent according to Claim 1, wherein each transitional section comprises convexly curved side edges that are configured to intermesh with adjacent concavely rounded throat sections in the initial state (A).

14. (New) The stent according to Claim 1, wherein the rounded edge sections of adjacent widened head ends are spaced apart from another in the initial state.